INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

October 3, 2003

TO: Interested Parties / Applicant

RE: Alcoa Automotive, Indiana Assembly and Fabrication Center / 033-18079-00056

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 9/16/03

October 3, 2003

Mr. Tony Highe
Alcoa Automotive, Indiana Assembly and Fabrication Center
1101 Oren Drive
Auburn, Indiana 46706-2674

Re: Re- Registration
No.: 033-18079-00056

Dear Mr. Highe:

The application from Alcoa Automotive, Indiana Assembly and Fabrication Center, received on August 25, 2003, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following emission units, to be located at 1101 Oren Drive, Auburn, Indiana are classified as registered:

(a) One (1) natural gas-fired billet heater # 1 for aluminum press # 1, with a maximum heat input capacity 10.5 mmBtu/hr.

(b) One (1) natural gas-fired billet oven # 2 for aluminum press # 2, with a maximum heat input capacity of 10.5 mmBtu/hr.

(c) One (1) natural gas-fired billet heater # 3 for aluminum press # 2, with a maximum heat input capacity of 4.5 mmBtu/hr.

(d) Twenty-two (22) natural gas-fired space heaters, with a total maximum heat input capacity of 16.44 mmBtu/hr.

(e) An aluminum extrusion facility, including three (3) aluminum presses, involved in the following operations:

(1) Press saw machining, with a maximum total throughput of 32,360 tons of aluminum per year.
(2) Machining operations (currently on engine cradle parts), with a maximum total throughput of 34,633 tons of aluminum per year.
(3) Machining operations (currently on non-engine cradle parts), with a maximum total throughput of 11,323 tons of aluminum per year.
(4) One (1) “Toyota Bumperline” with a maximum production capacity of 12,600 bumpers per week, consisting of two (2) bending machines, a machining unit with two (2) aluminum piercing stations.

(f) Welding operations, identified as 10A, 10B, 20A, 20B, 30A through 30D, 40A through 40D, and three (3) manual TIG repair welding booths, with a maximum total annual rod consumption of 319,127 lb (36.4 lb/hr).

(g) Plant maintenance, quality control, and die correction facility (which includes a small non-production cold cleaner degreaser).

(h) Two (2) pre-machining washers, identified as North Washer and South Washer, and one (1) parts washer, using 126 gallons per year of inorganic detergent.

(i) One (1) parts washer, identified as the Delphi parts washer, using a VOC-containing detergent.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control):

(a) the owner or operator of the Delphi washer and the small degreaser in the die correction facility shall ensure that the following control equipment requirements are met:

(1) equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
(A) the solvent volatility is greater than two (2) kilopascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight (38 0C) (one hundred degrees Fahrenheit (100 0F);
(B) the solvent is agitated; or
(C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch)) measured at thirty-eight (38 0C) (one hundred degrees Fahrenheit (100 0F) then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three -tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch)) measured at thirty-eight (38 0C) (one hundred degrees Fahrenheit (100 0F) or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celcius (48.9 0C) (0ne hundred twenty degrees Fahrenheit (120 0F):
(A) A freeboard that attains a freeboard ratio of seventy-five hundreths (0.75) or greater.
(B) A water cover when solvent used is insoluble in, and heavier than, water.
(C) Other systems of demonstrated equivalent control such a sa refigerated chiller or carbon adsoption. Such systems shall be submitted to the U. S. EPA as a SIP revision.

(b) the owner or operator of a cold cleaner degreaser facility shall ensure that the operating

requirements are met:

(1) close the cover whenever articles are not being handled in the degreaser.
(2) drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
(3) store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

(3) Any change or modification that may increase the potential to emit of single HAPs to 10 tons per year or greater, or that of VOCs or a combination of HAPs to 25 tons per year or greater, shall require prior approval of the Office of Air Quality.

This registration is a revised registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

mm

cc: File - Dekalb County
Dekalb County Health Department
Air Compliance – Doyle Houser
Northern Regional Office
Permit Tracking
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name: Alcoa Automotive, Indiana Assembly and Fabrication Center
Address: 1101 Oren Drive
City: Auburn, IN 46706-2674
Authorized individual:
Phone #:
Registration #:

I hereby certify that Alcoa Automotive, Indiana Assembly and Fabrication Center is still in operation and is in compliance with the requirements of Registration No. 033-18079-00056.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Re-Registration

Source Background and Description

Source Name:	**Alcoa Automotive, Indiana Assembly and Fabrication Center**
Source Location:	**1101 Oren Drive, Auburn, Indiana 46706**
County:	**Dekalb**
SIC Code:	**5051**
Re-Registration No.:	**033-18079-00056**
Permit Reviewer:	**Madhurima D. Moulik**

The Office of Air Quality (OAQ) has reviewed an application from Alcoa Automotive, Indiana Assembly and Fabrication Center, formerly known as RAMCO Manufacturing Company, relating to the operation of an aluminum parts production facility, which produces automotive parts and aluminum extrusions.

Emission Units and Pollution Control Equipment

The source consists of the following emission units and pollution control devices:

(a) One (1) natural gas-fired billet heater # 1 for aluminum press # 1, with a maximum heat input capacity 10.5 mmBtu/hr.

(b) One (1) natural gas-fired billet oven # 2 for aluminum press # 2, with a maximum heat input capacity of 10.5 mmBtu/hr.

(c) One (1) natural gas-fired billet heater # 3 for aluminum press # 2, with a maximum heat input capacity of 4.5 mmBtu/hr.

(d) Twenty-two (22) natural gas-fired space heaters, with a total maximum heat input capacity of 16.44 mmBtu/hr.

(e) An aluminum extrusion facility, including three (3) aluminum presses, involved in the following operations:

(1) Press saw machining, with a maximum total throughput of 32,360 tons of aluminum per year.
(2) Machining operations (currently on engine cradle parts), with a maximum total throughput of 34,633 tons of aluminum per year.
(3) Machining operations (currently on non-engine cradle parts), with a maximum total throughput of 11,323 tons of aluminum per year.
(4) One (1) “Toyota Bumperline” with a maximum production capacity of 12,600 bumpers per week, consisting of two (2) bending machines, a machining unit with two (2) aluminum piercing stations.

(f) Welding operations, identified as 10A, 10B, 20A, 20B, 30A through 30D, 40A through 40D, and three (3) manual TIG repair welding booths, with a maximum total annual rod consumption of 319,127 lb (36.4 lb/hr).

(g) Plant maintenance, quality control, and die correction facility (which includes a small non-production cold cleaner degreaser).

(h) Two (2) pre-machining washers, identified as North Washer and South Washer, and one (1) parts washer, using 126 gallons per year of inorganic detergent.

(i) One (1) parts washer, identified as the Delphi parts washer, using a VOC-containing detergent.

Existing Approvals

The source has been operating under previous approvals including, but no limited to, the following:

(a) Registration No.: 033-4962-00056, issued on November 21, 1995;

(b) Re-Registration No.: 033-17352-00056, issued on July 23, 2003.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on August 25, 2003.

Emission Calculations

See Appendix A of this document for detailed emission calculations for combustion sources.

PM/ PM-10 emissions from the pre-machining operations (supplied by source) = 0.05 tons per year.
VOC emissions from machining operations due to solvent use (supplied by source) = 9.7 tons per year.

VOC emissions from Toyota bumperline (supplied by source) = 0.02 tons per year.

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	2.33
PM-10	2.33
SO_2	0.1
VOC	10.7
CO	15.4
NO_x	18.4

HAPs	Potential to Emit (tons/yr)
Single HAP	Negligible
Total	Negligible

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.

County Attainment Status

The source is located in Dekalb County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Dekalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

(b) Dekalb County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons per year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) The National Emission Standards for Hazardous Air Pollutants (NESHAP) for Halogenated Solvent Cleaning (40 CFR 63, Subpart T) is not applicable to this source since the source does not use any halogenated solvents for any of the degreasing operations.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

The potential to emit of all criteria pollutants from this source is less than 250 tons per year, and it is not one of the twenty-eight (28) listed source categories. Therefore, 326 IAC 2-2 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is located in Dekalb County and the potential to emit of all pollutants are less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of this aluminum parts production facility will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Process Operations) and 40 CFR 52 Subpart P

The potential to emit of PM from the machining operations is less than 0.551 pounds per hour. Therefore, the machining operations are exempt from the requirements of 326 IAC 6-3.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The two (2) pre-machining washers, and the parts washer for the Toyota bumperline do not use organic solvents, and are not subject to the requirements of 326 IAC 8-3-5. The organic solvent cleaning operations associated with the plant maintenance, quality control, and die correction facility, and the parts washer identified as the Delphi washer were installed after July 1, 1990, and are cold cleaner degreasers without remote solvent reservoirs. Therefore, these cleaning operations are subject to 326 IAC 8-3-5.

Pursuant to 326 IAC 8-3-5:

(a) the owner or operator of a cold cleaner degreaser facility shall ensure that the following control equipment requirements are met:

(1) equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
  (A) the solvent volatility is greater than two (2) kilopascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight (38 0C) (one hundred degrees Fahrenheit (100 0F);
  (B) the solvent is agitated; or
  (C) the solvent is heated.

(2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch)) measured at thirty-eight (38 0C) (one hundred degrees Fahrenheit (100 0F) then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three -tenths (4.3) kilopascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch)) measured at thirty-eight (38 0C) (one hundred degrees Fahrenheit (100 0F) or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celcius (48.9 0C) (0ne hundred twenty degrees Fahrenheit (120 0F):
  (A) A freeboard that attains a freeboard ratio of seventy-five hundreths (0.75) or greater.
  (B) A water cover when solvent used is insoluble in, and heavier than, water.

(C) Other systems of demonstrated equivalent control such a sa refigerated chiller or carbon adsoption. Such systems shall be submitted to the U. S. EPA as a SIP revision.

(b) the owner or operator of a cold cleaner degreaser facility shall ensure that the operating requirements are met:

(1) close the cover whenever articles are not being handled in the degreaser.
(2) drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
(3) store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements)

The potential VOC emissions from all emission units at this source are less than 25 tons per year. Therefore, 326 IAC 8-1-6 does not apply.

Conclusion

The construction and operation of this aluminum parts production facility shall be subject to the conditions of the Re-Registration No. 033-18079-00056.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Ovens and Space Heaters

Company Name: Alcoa Automotive, Indiana Assembly and Fabrication Cente
Address City IN Zip: 1101 Oren Drive, Auburn, Indiana 46706
Permit Number: 033-18079
Plt ID: 033-00056
Reviewer: Madhurima D. Moulik
Date: 8-Sep-03

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
41.9	367.4

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.3	1.4	0.1	18.4	1.0	15.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMB
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-0(
(SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See page 2 for HAPs emissions calculations.

updated 4/99

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emission

Company Name: Alcoa Automotive, Indiana Assembly and Fabrication Cente
Address City IN Zip: 1101 Oren Drive, Auburn, Indiana 46706
Permit Number: 033-18079
Plt ID: 033-00056
Reviewer: Madhurima D. Moulik
Date: 8-Sep-03

	HAPs - Organics				
	Benzene	Dichlorobenze	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	3.858E-04	2.204E-04	1.378E-02	3.307E-01	6.246E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	9.185E-05	2.021E-04	2.572E-04	6.980E-05	3.858E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Welding and Thermal Cutting

Company Name: Alcoa Automotive, Indiana Assembly and F
Address City IN Zip: 1101 Oren Drive, Auburn, Indiana 46706
Permit Number: 033-18079
Plt ID: 033-00056
Reviewer: Madhurima Moulik
Date: 8-Sep-03

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
WELDING			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Tungsten Inert Gas (TIG)(carbon	1	36.4	0.0055	0.0005			0.200	0.018	0.000	0	0.018
EMISSION TOTALS											
Potential Emissions lbs/hr							0.20				0.02
Potential Emissions lbs/day							4.80				0.44
Potential Emissions tons/year							0.88				0.08

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process col
**Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculting the emissions.
Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8
Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)
Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,
Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode u
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2